

# Commonly Used School Construction Terms

Single-prime : A method of bidding/contracting in which the owner contracts with a single prime contractor (usually a general contractor) who then has subcontractors with plumbing, electrical, heating, ventilation, and air conditioning (HVAC) contracts. Usually results in less conflict during construction. An approved method stipulated in GS 143-128.

Multi-prime : A method of bidding/contracting in which the owner contracts separately with a General, Plumbing, Electrical and HVAC contractors (sometimes additional ones as well). An approved method stipulated in GS 143-128.

Dual Bidding: A method of bidding in which both of the above types are solicited. An approved method stipulated in GS 143-128.

Design/Build: A concept of construction whereby both the design and construction components of a given project are handled by a single entity. The scope of work involved varies as per agreement between the parties. Must be approved by the State Building Commission prior to use.

## Construction Management (2 basic types):

Construction Management: In this scenario, the LEA (or County) hires a firm to perform "Construction Management." He is at no risk, but sells his services as a way to control costs and manage construction. He often will break down the construction prime bids into many contracts (steel, grading, drywall, masonry, etc in addition to the normal prime contractors). He may offer suggestions or a shopping list on ways to save money. Often it is such items as gravel in lieu of asphalt paving, less expensive light fixtures, cheaper roofing, etc. He does provide construction expertise to the LEA.

Construction Management At Risk: In this scenario, the LEA (or County) hires a firm to perform "Construction Management" in which the Manager provides a guaranteed maximum price. In practice, however, this maximum price is usually not determined until after bids are received. An approved method stipulated in GS 143-128.

Sale lease-back/ Capital Lease Financing: This (I assume) refers to SB2009, Public-Private Partnerships. In this case a developer or non-profit takes ownership of the school property and builds/renovates the facility. The developer then leases the facility to the LEA for twenty years or more. At the end of the lease, the property is turned back over to the LEA for free or a nominal sum. The developer is able to claim depreciation and potentially other tax breaks as a part of his profit. The developer borrows for the development on the commercial market, usually at a substantially higher rate than bonds would be. The current law requires substantially the same requirements for bidding and construction as public work.

Private & Commercial Financing : See sale lease-back above

Use of Real estate Investment Trusts : See sale lease-back above

Impact Fees : These are fees charged usually to developers for the impact upon local infrastructure (roads, water/sewer, schools) in an effort to offset some of these costs. Typically these costs are passed on to the eventual home buyer or tenant as higher costs.

Transfer Tax : A special tax on the transfer of real estate to help overcome local infrastructure costs as noted above.

## Types of Bonds:

Local -General referendum decided by a general vote of the county/municipality. Usually the lowest interest rate but very time consuming to agree on the amount of the bond, prepare a bond campaign and obtain a vote of approval. If not approved, a second referendum (usually for a smaller amount) may take another year or more, thus losing more money to inflation and suffering overcrowding or poor facilities longer. Regulated by the LGC.

Local bonds use a guaranteed revenue source (such as lottery funds). Does not require voter approval but will carry a slightly higher interest rate. Regulated by the Local Government Commission - LGC.

State Bonds are those that are issued by the State of North Carolina (who then carries the debt) and distributed to the various counties/LEAs under some formula. State Bonds were issued in 1996, 1983 and numerous other times.

COPS: Certificates of Participation. In this special case of financing/bonds, the County takes over the ownership of the school property and builds the facility. It does not require voter approval but usually results in a higher interest rate. Regulated by the LGC.

## School Design terms (just a sample):

Cost per Square foot: probably the most reliable indicator of costs. School Planning solicits and tracks these costs and publishes them on its web site

Cost per student: not a reliable indicator of cost because smaller schools must devote more of their cost to core spaces (cafeteria, media center gym) that does not contribute to capacity.

Design Function: How well a school "works." separation of noisy vs. quiet activities, arrangement to promote supervision and safety, adequate space for learning or other activities, minimization of corridors or other non-productive spaces, etc.

Energy efficiency: Selection of HVAC, lighting, water and other systems to minimize energy/utility usage in keeping with initial cost/life cycle cost analysis

Infrastructure Cost: Additional cost usually outside the realm of the onsite project costs. These costs may include, but are not limited to, roads, sewer, water, electrical service, etc. In regard to technology, this refers to the cost of installing the conduits/cables and electrical for networking and is usually a part of construction costs.

Stock Plans: Plans and specifications that are predetermined and available for use by interested parties. Most often, modifications are made to meet specific requirements of the owner. These are usually limited to small projects such as houses or restaurants.

Prototype Plans: Plans and specifications that are developed to be used multiple times on different sites. Modifications are made for different site conditions, HVAC orientation or specific requirements of the owner. The 1996 North Carolina General Assembly directed the State Board of Education to establish a central clearinghouse of prototype plans ([www.schoolclearinghouse.org](http://www.schoolclearinghouse.org)) for access by local boards of education that may want to use a prototype design in the construction of school facilities.

Custom Plans: Plans and specifications are designed by an architect for a client's specific project.

Performance Bond: A bond to ensure that a service provided by a contractor will be completed according to plans and specifications within the agreed upon contract amount.

Payment Bond: A bond to ensure that a the contractor will make payments to his various subcontractors for their work.

Bid Bond: A bond provided by bidders on a project that guarantees that they will enter into a contract for the price shown on their bid.

Pre-Fab Construction: A construction technique where the components are constructed offsite and assembled or installed onsite. May be small items such as cabinetwork or modular portions of a building. See Modular Construction below.

Modular Construction: Two types

Modular Units: Stand alone single classrooms. Usually double wide nominal 24x32 or 24x36. Both below recommended size for primary classrooms

Modular construction: A larger building containing two or more classrooms, toilets, etc composed of modular pieces attached together on site. Very expensive to move

Specification: A detailed description of materials, methods of installation and other pertinent information to identify the components to be used in the construction of a project.

Working Drawings/Construction Documents: A detailed document consisting of plans and specifications that enable a contractor(s) to bid and build a project.

Change Order: A written document that makes a change to the original plans/specifications. Such changes may result in a debit or credit in the original agreed upon cost.

Long Range Plan: Every five years, each LEA is required to develop a Long Range Plan of future facility needs. School Planning has developed a computerized program that standardizes construction costs and typical new school spaces. Pupil population projections are provided and each LEA assesses their facilities for needed renovations, additions and new schools.

Sustainability, Green Buildings, LEED, High Performance Buildings: A method of design and construction that emphasizes energy/water conservation, recyclable materials, renewable resources, waste reduction, improved air quality and other similar features.

Life Cycle Cost Analysis: A study of alternative specific building systems and components (such as HVAC, insulation thickness, exterior materials, etc.) to determine their cost over their expected life. Results of this analysis is then used to potentially select a component that may be more expensive initially but less expensive over its useful life.